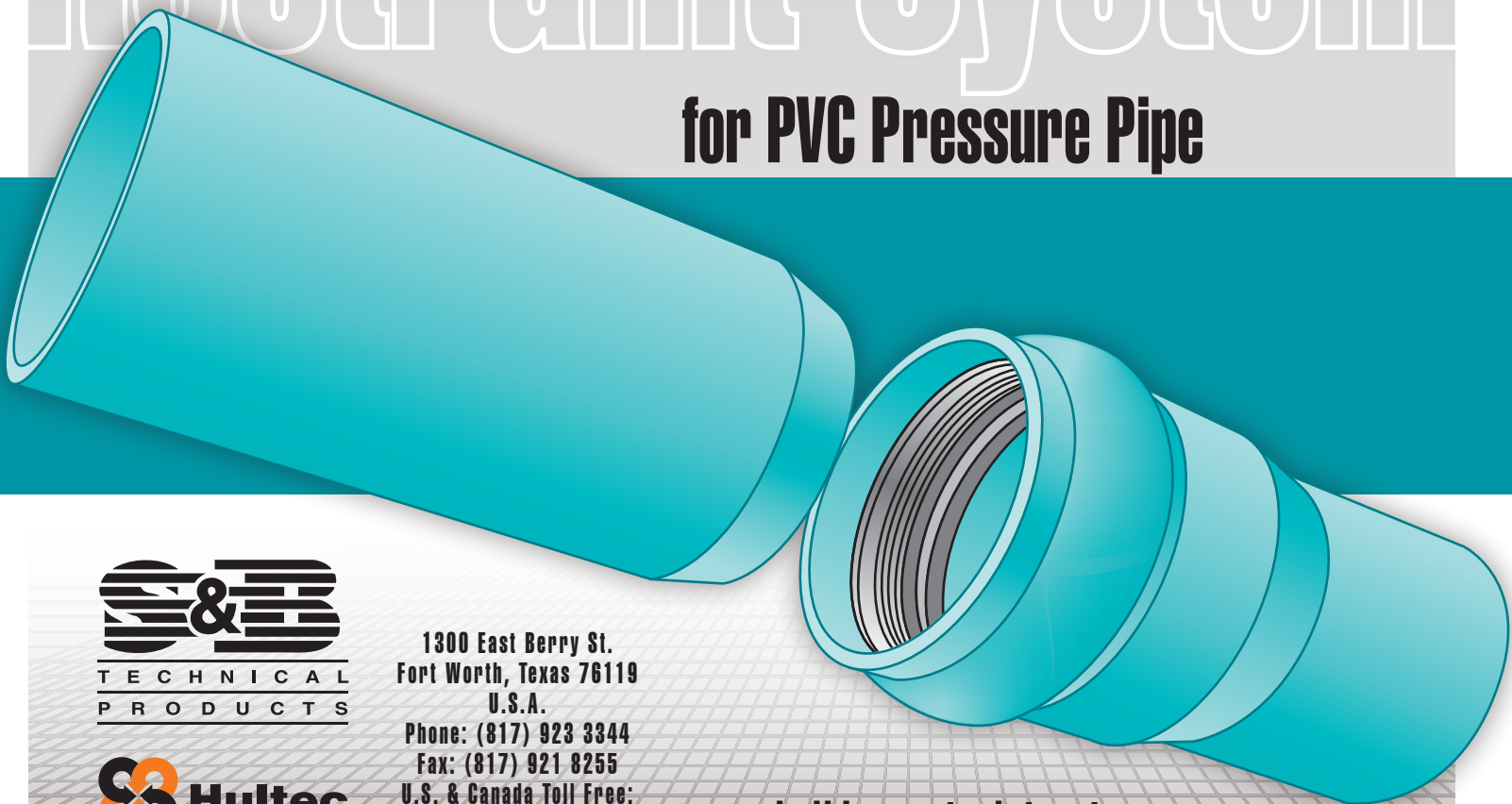


# The Bulldog Restraint System

for PVC Pressure Pipe



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Phone: (817) 923 3344

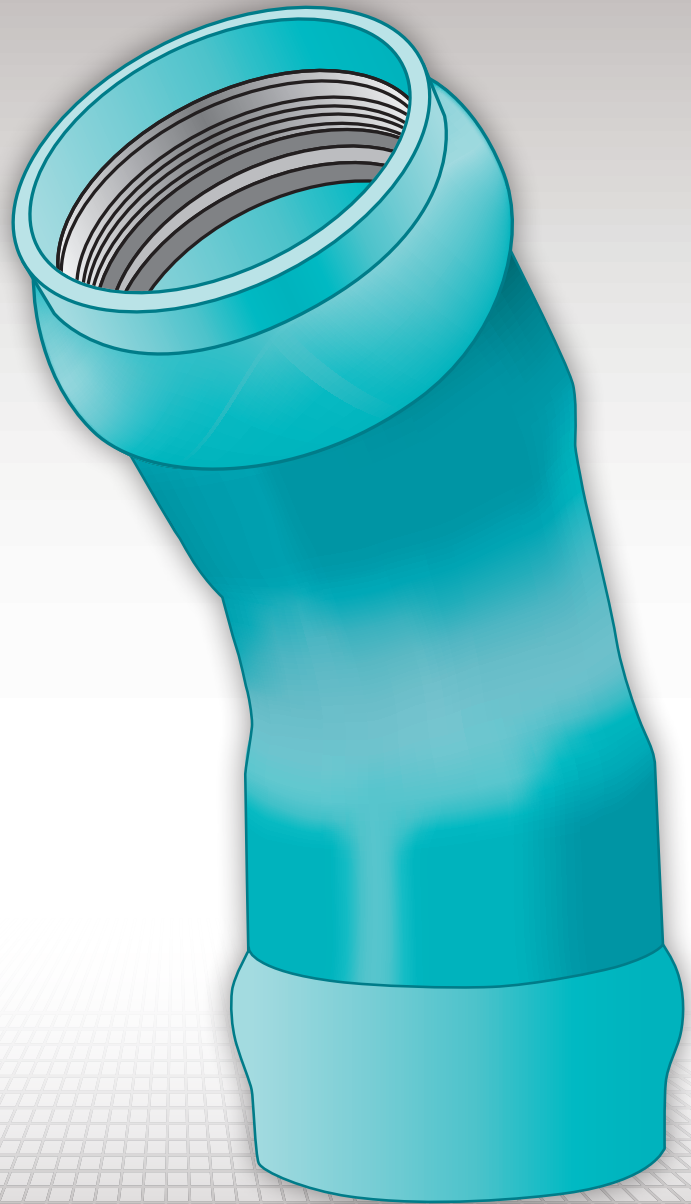
Fax: (817) 921 8255

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(800) 432 8213

[www.bulldogrestraintsystem.com](http://www.bulldogrestraintsystem.com)

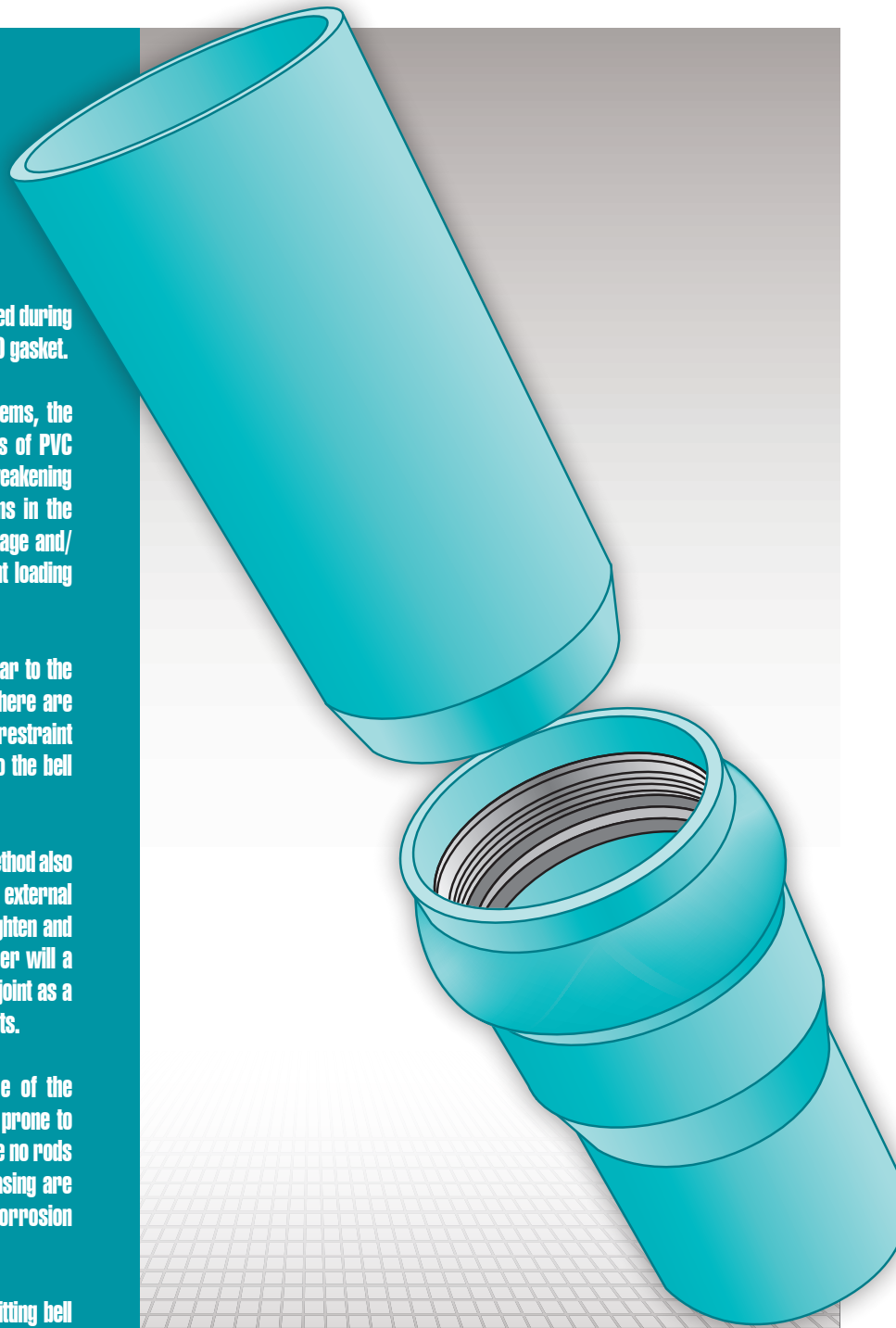
# Introduction

- The Bulldog™ PVC pressure pipe integral joint restraint system is one of several products in our line of joint restraint devices. It is primarily designed for use in open-trench construction of PVC pressure pipelines installation where pipe-to-pipe and pipe-to-fittings joint restraint is required. It can be use in both potable water distribution and transmission as well as in sanitary sewer force mains.
- This unique innovative restraint design can be used to restrain PVC pipe bell joints as well as fabricated PVC pressure fittings.
- Many years of engineering and design experience in integrated pipe sealing systems has been applied to the Bulldog™ joint restraint.
- The Bulldog™ is available for AWWA C900 PVC pipe in sizes 4"-24". The Bulldog™ is also available in ASTM IPS sizes 3"-8".
- Our partnership with major PVC pipe manufacturers in North America will bring the Bulldog™ equipped PVC pipe to the contractor and municipal authorities.
- The Bulldog™ is fully compliant with Underwriters Laboratories and Factory Mutual and meets or exceeds the requirements of ASTM F-1674 (Standard Test Method for Joint Restraint Products) for Use With PVC Pipe.



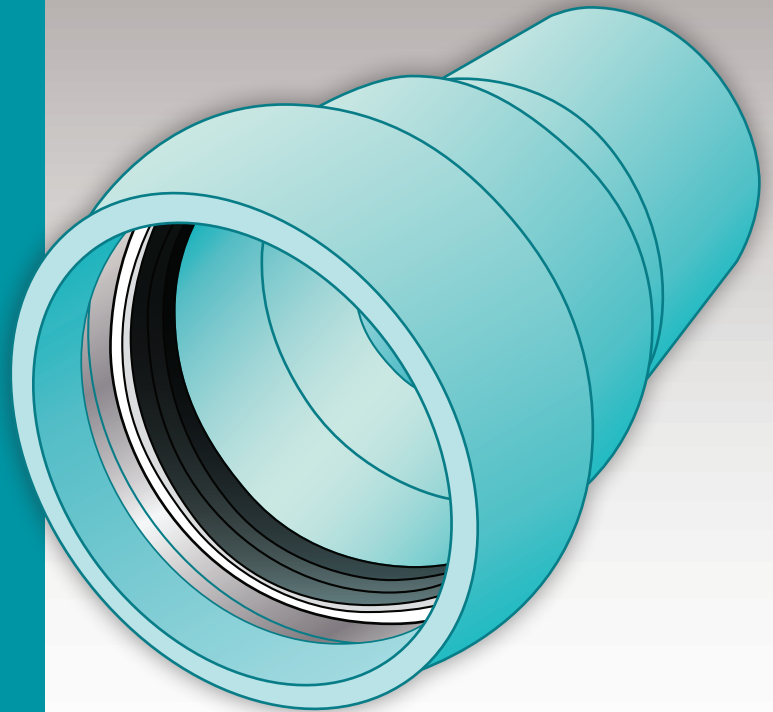
# Features

- **Manufacturing:** The Bulldog™ restraint system is installed during the PVC pipe helling process, along with the Rieber C-900 gasket.
- **No Point Loading:** In non-serrated type restraint systems, the manual tightening of restraining wedges into the walls of PVC pipes commonly causes point loading on the pipe wall, weakening the pipe's hydrostatic strength. This leads to problems in the long-term operation of the pipeline and can lead to leakage and/or pipeline failure. With the Bulldog™, there is no point loading to worry about.
- **Easy Assembly:** Assembly of the Bulldog™ joint is similar to the joining of the traditional Rieber-gasket PVC pipe joint. There are no tools, external rods, clamps or bolts needed! The restraint mechanism is activated by simply pushing the spigot into the bell of the adjoining pipe equipped with the Bulldog™.
- **Reduces Potential for Human Error:** The easy assembly method also takes out the human errors involved in the installation of external joint restraint devices. There are no nuts and bolts to tighten and there are no correct torques to worry about. No longer will a Contractor be held responsible for a leaking restrained joint as a result of over-tightening or under-tightening nuts and bolts.
- **Minimum Corrosion Exposure:** The minimal exposure of the Bulldog™ joint restraint to the elements makes it less prone to corrosion than external joint restraint devices. There are no rods or harnesses to corrode! The grip ring and the ring casing are coated with an NSF61 certified with a very effective corrosion protection.
- **The Bulldog™ joint restraint is encased in the pipe or fitting bell** reducing exposure to the elements making it significantly less prone to corrosion than external joint restraint devices.



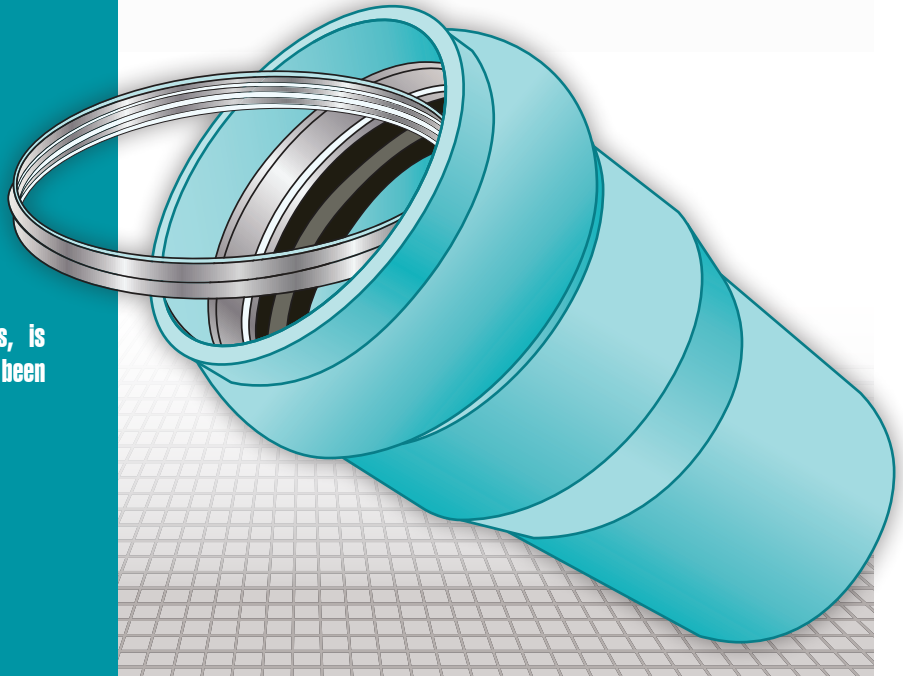
# Bell With Rieber Gasket And Casing

- The restraining mechanism in the Bulldog™ system consists of a metal casing that is integrated with the Rieber gasket in the pipe bell.



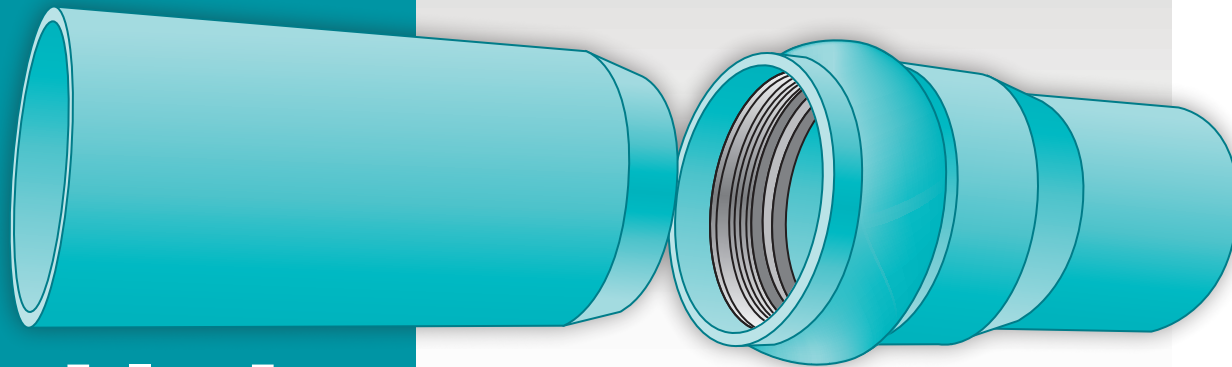
# Insert Grip Ring

- A grip ring, with uniform, uni-directional serrations, is manually inserted into the casing after the pipe has been hydro-tested at the manufacturing plant.



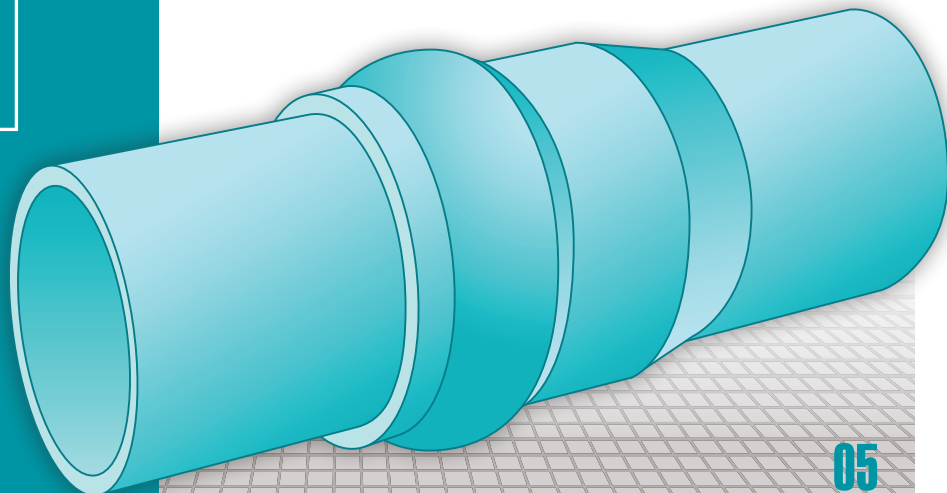
# Insert Spigot

- In the field, the joint is assembled by simply pushing the spigot into the bell of the pipe to the insertion marks. The gripper ring with uni-directional serrations only allows entry of the spigot into the bell but does not allow its withdrawal.

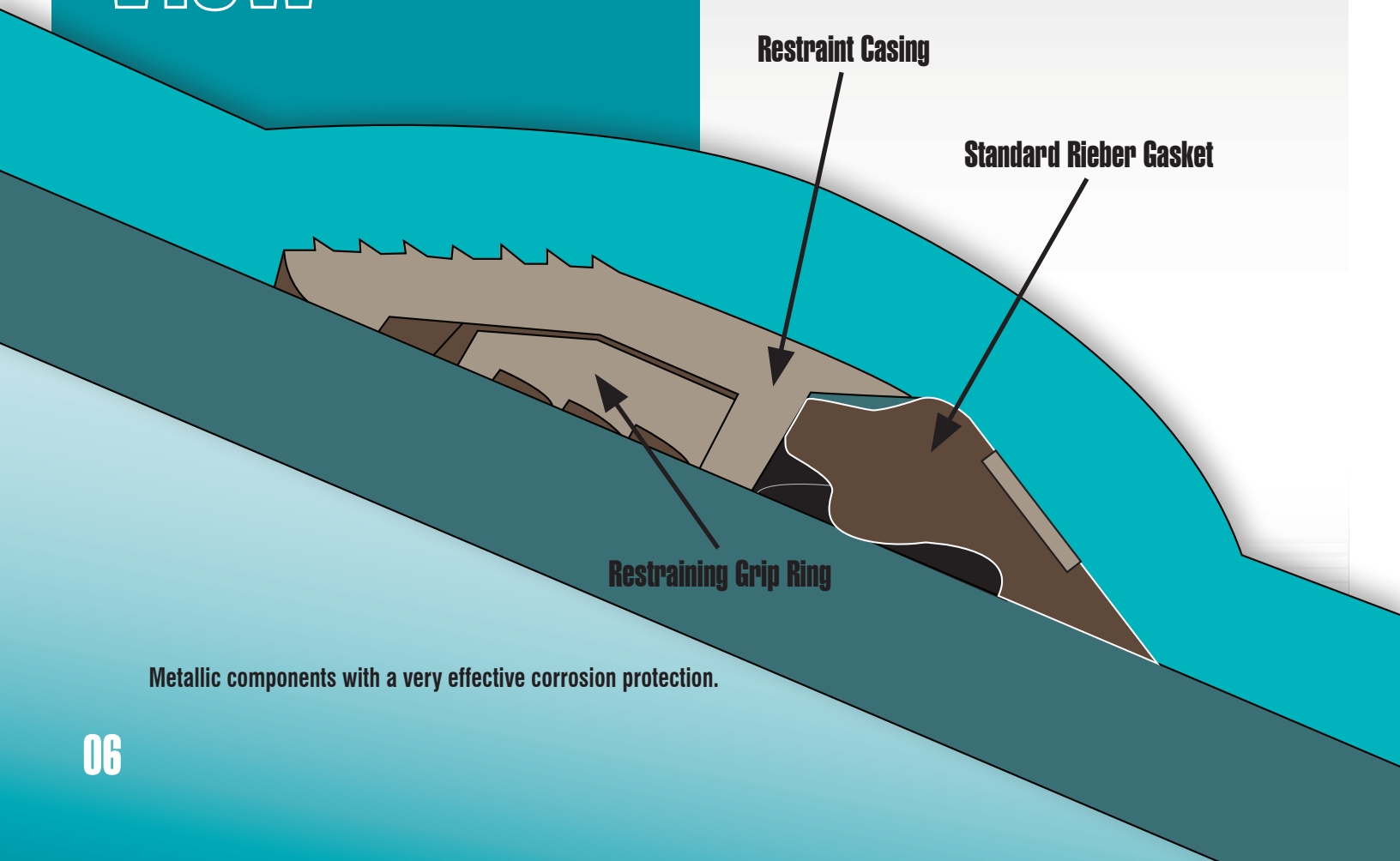


# Assembled Restrained Joint

- Once the pipe is installed and the joint sets, the grip ring engages the spigot; thus locking the joint.



# Cross Sectional View



**Restraint Casing**

**Standard Rieber Gasket**

**Restraining Grip Ring**

**Metallic components with a very effective corrosion protection.**

# A New Solution

## The Bulldog™ Joint Restraint is the Solution!

- With the introduction of the Bulldog™ integral joint restraint system for PVC pressure pipe and fittings, a number of common problems associated with external joint restraint products are eradicated. Installation is simple and requires no special tools. Human error associated with external joint restraint installation is eliminated and corrosion of the product itself is virtually non-existent. For the Contractor and the Municipal engineer, it provides ease of use and complete reliability.





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